

Thursday, May 28, 1936

10:15 o'clock a. m.

Court convened pursuant to adjournment.

PRESENT: Messrs. Norman S. Parker
Francis W. Parker, Jr.
Threedy

F O R E S T F. M O U L T O N,

called as a witness on behalf of the plaintiffs, having been
first duly sworn, testified as follows:

DIRECT-EXAMINATION

By Mr. N. S. Parker:

Q Please state your full name, age and present address.

A Forest R. Moulton; age, sixty-four; address, 327 South
La Salle, Chicago.

Q What is your present occupation?

A I am a director of Utilities Power & Light Corporation.
They operate light and power companies and gas companies in
the United States and Canada and electric light companies in
Great Britain.

Q Please state what degrees, if any, you have received in
science.

A A. B., Bachelor of Arts; Ph. D., Doctor of Philosophy;

Sc. D., Doctor of Science.

Q Please state whether or not you are a member of any learned societies or associations in the United States.

A I am a member of the National Academy of Sciences, operating under a charter granted in 1863, limited membership. One of its obligations is to furnish scientific advice to the Federal Government under request of President Wilson in 1917.

Organized National Research Council, organized scientists of the country for national defense. I was elected to that in 1910. That corresponds, generally, to the French Academy of Sciences and the Royal Society of Great Britain in London.

Member of the American Philosophical Society of Philadelphia, founded by Benjamin Franklin; also a limited membership.

I am a member of the American Academy of Arts and Sciences in Boston; also a limited membership.

I am a member of the American Mathematical Society; Mathematical Association of America; the American Astronomical Society; American Association for the Advancement of Science, and a number of minor ones, some of them honorary.

Q Are you a member of any learned societies in foreign countries?

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A Fellow of the Royal Astronomical Society of Great Britain, honorary; corresponding member of the British Association for the Advancement of Science.

Q Please state whether or not you have written any books of a scientific nature, and if so, you might specify some of them.

A I wrote a book on Celestial Mechanics, published by the Cambridge, England, Press in 1902.

I wrote a book on astronomy, published by the Macmillan Company in New York, in 1906.

Joint author of a book on The Tidal Theory, published by the Canadian Institute of Washington in 1909, or possibly 1910.

I am the author of another book on Celestial Mechanics, published by the Macmillan Company in 1914.

Author of another book on astronomy, published by the Macmillan Company in 1916.

Author of a book on Periodic Orbits, published by the Carnegie Institute of Washington in 1920.

Joint author of a book published by the University of Chicago Press in 1923.

Author of a book on New Methods in Exterior Ballistics, published by the University of Chicago in 1926.

And several others, reaching down to the present moment.

Q Please state what positions you have held in the course of your scientific career.

A The principal position I have held as a scientist was as a member of the faculty of the University of Chicago from 1896 to 1926.

Q Please state what work you have done, if any, in connection with electricity.

A In one of my books that I mentioned I have discussed the mathematical theory of electric circuits. I have had experience in motion picture projection machines.

Q Please state generally what was the nature of your work in connection with photo projection machines.

A In the mechanisms and the optical systems, both in connection with patents and improvements of machines.

Q Please state the nature of your activity with patents in connection with these machines.

A I was consultant for the International Projector Corporation on various patents concerned with mechanisms, in fact, I applied for some, and with the projection apparatus. Among other things I devised elliptical gear mechanism and means of constructing the elliptical gears.

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Q Please state whether or not you have taken any other part in the development of commercially employed machinery.

A In the orchestral phone, in reduction gears, in telescopes.

Q What experience have you had, if any, in connection with coin-operated machines?

A I was director of concessions at the Century of Progress Exposition in 1933 and let the contracts for coin-operated machines on the grounds.

Q Please state your connection, in general, with the Century of Progress.

A I was a member of the Board of Trustees, nearly a hundred of them, a member of the Executive Committee, Director of Concessions from July 1, 1931, to November 1, 1933.

Q State whether or not this involved experience with and study of the problems of coin-operated machines?

A All applicants for concessions for coin-operated machines submitted their hopes and expectations and any other information they considered pertinent. On the basis of the application, I went into the history of similar things, if there were any such history, in connection with earlier expositions.

Q Please state whether or not in connection with your activities at the Fair or elsewhere, you have had occasion to

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read and study patents, and if so, to what extent. Give the details.

A I have had occasion to study patents in a considerable number of connections, first, of motion picture projection machines. As consultant for Fox Films I looked into the patent situation for the sound recording substantially of the type now used. The study of those patents included American and foreign. The occasion for it was a controversy between Fox Films and Electric Research Products, Incorporated, a subsidiary of Western Electric Company. I devoted many weeks to this. Also, as a consultant for Fox Films Corporation I looked into the subject of colored photography. I spent many weeks on it.

Q You mean on the patents of color photography?

A Yes, I went into the patent situation at that time and looked over them. I do not recall the exact number, but more than a hundred patents.

Q In connection with this and other patent work you have mentioned, did you have occasion to study and apply patent claims?

A One of my duties as consultant for Fox Films was to examine claims of patents at various dates and their relationship to each other, to give advice respecting priority.

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Q Are you familiar with the patent in suit, the Griffith patent No. 2,007,083?

A I do not remember it from the number.

(Mr. Parker handed copy of patent to the witness)

A Yes, sir; I am familiar with it.

Q Please state when your familiarity with this patent began. In other words, how long have you been connected with it and to what extent have you read and studied it?

A I received a copy of the patent last November or early in December and read it over quite thoroughly several times.

Q Would you say that you are thoroughly familiar with this patent? Have you studied it carefully?

A Yes, sir.

Q What attention have you paid to the claims?

A I read the claims repeatedly and carefully at that time and have since.

Q When did you first know of a target device employing a gun shooting an electric ray and a target including a photo-electric cell?

A It was at least a year ago. I do not recall the time I first saw it.

Q What machine was that?

A Perhaps eighteen months ago. It was a machine that was

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on La Salle Street, the number I have forgotten.

Q Do you know who made the machine or who had it?

A A Mr. Terry invited me to see it, and I do not recall who it was that made it, if he told me.

Q Do you know whose property the machine was?

A I do not.

Q Do you see any machine in the court room which resembles the one you saw?

A Both of these machines in a general way resemble it.

Q Are you familiar with the machines made by or for plaintiffs in this present suit?

A I am, in a general way.

Q You have seen those machines in operation?

A Yes, and have operated them.

Q You have operated the machines yourself?

A To a limited extent; yes.

Q Are you familiar with the machines made by the defendants in the present case, Ford Amusement Devices, Incorporated?

A I have seen the machine and have seen it operate, but have not operated it.

MR. TREEDY: If the Court please, I will move that the answer be stricken out as not being responsive to the question.

THE COURT: Well, it is only the interrogator who can raise

that objection. It is otherwise competent.

MR. THREEEDY: I think it is giving testimony that is not solicited.

THE COURT: Overruled.

MR. PARKER: Q Please state what opportunity of observation you have had of defendant's machine. In other words, where did you see it?

A I saw it in a shop on Washington Street, somewhere between Clinton and Halsted, on the south side of the street.

Q Did you understand this machine at that time was at defendant's premises, or did you think it was somewhere else?

A I understood it was on the defendant's premises.

Q You saw the machine operated at that place, did you?

A I saw it operated.

Q Did you examine the machine yourself, did you inspect it?

A No. I inspected it in a casual way, the general functioning of the machine.

Q Will you please describe, generally, plaintiff's machine, as you understand it?

A It is a machine which causes the target to pass across the field of view upon the insertion of a coin in a coin slot. It is provided with a gun which the operator may aim in any direction he wishes. He pulls the trigger of the gun and a

signal, a thud it is called, sounds in the machine, and nothing more, except the internal mechanism that connects what is called the shot counter. If the person using the gun points it at the photoelectric cell that is carried on the target, then a hit is registered on a panel that contains a series of ten lights, each hit advancing the light that goes into operation to one higher number. If he makes ten hits, the score counter registers ten. When the trigger has been pulled ten times the machine stops.

Q Are you applying this description to plaintiff's machine or defendant's?

A It applies equally to either.

Q Please state whether or not you are familiar with the wiring diagram which I hand you, which is marked Plaintiff's Exhibit 34, Wiring Diagram of Ford Amusement Devices.

A I am familiar with that.

Q Please state whether or not you are familiar with plaintiff's Exhibits 30 to 33, inclusive, which I hand you here.

A I am familiar with exhibits marked 30 to 33, inclusive.

Q Will you please compare them with Plaintiffs' Exhibit 34, the blue print you testified you are familiar with.

A The wiring diagrams are the same. The wording on the blue print is reproduced in black on the exhibits.

Q Referring, for example, to Plaintiffs' Exhibit 30 and the circuits marked in red, will you please state whether or not you have traced these circuits yourself and checked them for correctness.

A I have traced the circuits, and, as indicated, they would function to produce the results said to follow.

Q Please state whether or not the comments added to the photostat in red ink and the typewritten slip are, in your opinion, correct?

A They are correct.

Q Please make the same observation as to the various colored lines and comments added to Plaintiffs' Exhibits 31, 32 and 33. Please check them for correctness and tell me whether or not they are correct.

A On 31, that is correct.

Q Plaintiffs' Exhibit 31 is correct.

A No. 32 is correct. No. 33 is correct.

Q Please state whether or not you have applied the claims relied upon in the patent in suit, namely, claims 1, 2, 10 and 11, to Plaintiffs' Exhibit 30 to 34, inclusive.

A I have applied the limitations in claims 1, 2, 10 and 11 to the wiring diagrams shown on the blue print and Exhibits 30 to 33, inclusive.

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Q Have you considered these same claims in relation to the blue print, Plaintiffs' Exhibit 34?

A I did not get the question.

MR. PARKER: Read it.

(The question was read)

MR. PARKER: This blue print you have testified is identical with the photostats upon which plaintiffs' Exhibits 30 to 33 are drawn?

A I have.

Q Referring to Plaintiffs' Exhibit 32, can you find shown on this exhibit a traveling target? You may consider also in this connection Plaintiffs' Exhibit 36.

A Here is the traveling target (indicating).

MR. PARKER: Give it a number.

A It has already been given one, the number III.

Q You mean III is applied to a part of the target structure?

A III is applied, as I understand, to a part of the target structure.

MR. THREEEDY: I would like to have counsel let the witness testify to the particular drawings and not lead him on by suggestive questions.

THE COURT: The objection is well taken.

MR. PARKER: Q I hand you Plaintiffs' Exhibit 37 and ask

you to point out on Plaintiffs' Exhibit 37 the entire target structure and use the numbers or symbols already applied to that exhibit.

A The structure covered by Nos. I, III³, III, 34, 30, the whole structure that is in the upper part of the drawing, would be the target.

Q Please state whether or not this target structure you have described is a fixed or a moving target.

A It is a movable target, especially clearly illustrated in Plaintiffs' Exhibit 36.

Q State whether or not this target structure you have described would be correctly described as a traveling target.

A That would be a correct description.

Q Can you find on the structure of Plaintiffs' Exhibits 36 and 37, and also 32, a photoelectric cell?

A On 36, the photoelectric cell is marked I. On 37, the photoelectric cell is marked I. On 32, the photoelectric cell in the upper right hand corner is marked I, and also "Photo Cell."

Q Please state whether or not this photoelectric cell is associated with or moves with the traveling target.

A The photoelectric cell moves with the traveling target.

Q Can you find in any of these exhibits a photoelectric

amplifier? If so, please point it out and employ the symbols, if any, with which it is marked.

A In Exhibit 32 the photoelectric amplifier is indicated in the lower right hand corner. In 36, also in the lower right hand corner, showing some electron tubes.

Q Can you find in these exhibits, and taking for example Plaintiffs' Exhibit 32, means operatively connecting the cell and amplifier? If so, please point them out and give them the numbers or symbols applied on Plaintiffs' Exhibit 32.

A On the right hand side of Exhibit 32 there are two wires shown running down marked C-16 and C-15.

Q In connection with these connecting means, do you find included with them stationary contact means? If so, please point them out on Plaintiffs' Exhibit 32, for example, and give them the numbers with which they are there marked.

A The stationary contacts are marked C-13 and C-18.

Q Please state whether or not in Plaintiffs' Exhibit 32 you can find traveling contact means engaging said stationary means and movable with the target. If you can, please point them out and give them the symbols with which they are marked in Plaintiffs' Exhibit 32.

A Near the lower right hand corner are the moving contacts lettered C-14 and C-17.

light flash, and trace out whatever circuits are necessary to

Q Please state whether or not these parts, C-14 and C-17, move with or are movable with the target.

A They are movable with the target.

Q Can you find these movable contacts in Plaintiffs' Exhibit 37?

A They are marked, "Contacts Moving with Target," and are marked 26, if I can get where that comes in. I do not know what that leads into. Let me see. There is no letter on it.

Q If you can find them there, please letter them to correspond with the lettering of Plaintiff's Exhibit 32.

A On the exhibit 32 a moving target C-14 and C-17.

Q On the basis of the showing of Plaintiffs' Exhibit 37, would you say that these moving members C-14 and C-17, are movable with the target?

A They are movable with the target.

Q Please state whether or not you can find in Plaintiffs' Exhibit 32 signal means actuated by the current from said amplifier if said cell be struck by a light flash. If you can find them please point them out.

A The signal means are the sound chimes marked III' and the target drop operating the solenoid is III⁴.

Q Please point out how these signal means are actuated by the current from the amplifier if the cell be struck by a light flash, and trace out whatever circuits are necessary to

establish this relationship, if it can be established.

A Now the language used, of course, is not quite technical, so I have to enter into a little explanation.

The current that comes in, probably in micro volts, from the photoelectric cell into the amplifier, so-called amplifier, controls the input circuit source of energy at the bottom of the center of the page, marked c'. Through this control and the amplifier the circuit is closed by relay marked R. When the circuit is closed at the place marked R, then the input circuit passes through this signal means.

Q Point out, in somewhat greater detail, the actual circuit which is closed to control or actuate the signal means, and please point out how this circuit or the signal means are actuated, in response to what, by the circuit of the cell I see by the light flash.

A Do you want me to go around the circuit?

Q You might start with the effect of the closure of the switch at the relay R, about which you have testified. Please point out, also, the function of the relay R' and the consequent control by it.

A The relay R closes the circuit marked c-7'. Now, to go through the circuit it would be best to start back at the input of the source of energy, and remember

now, that these switches are closed, the circuits are closed, they are starting at c', at the middle of the bottom of the sheet. Pass up to a little beyond the center of the sheet and to the left to c-2. Continue along to c-3, around to the trigger pull switch, which is closed at the same time the photoelectric cell is actuated. Pass on to c-4 to about the center of the sheet and up a little to the right hand to c-5, to the right hand margin of the sheet, down on a wire called c-5, around through the switch that is closed by the relay R, up on line c-6 to the left through the relay R' into wire c-7. There is a division point, c-7. Then up and to the right through c-7', that switch having been closed by the relay R'. Then vertical line marked c-6' on the way to two branches, auxiliary circuit, one to operate the chime sound, and the other the target drop solenoid. Omit those for the moment. c-6' near the upper right hand corner of the diagram. Then to the left and through the solenoid to the line marked c-4''.

The fact is, they are auxiliary circuits superimposed on these, so it is very hard to describe the circuit in words without digressing too much on the auxiliary circuit.

Well, there is a circuit here going up on c-4' and back on c-3', and that completes the circuit.

Now, going back to the place where it began to branch to c-7, the lead in the vertical direction goes to c-8,

then around through c-9, and then the switch which is closed until the ten shots are fired through c-10, and finally, c-11 back to the source of energy.

Q Do you find in Plaintiffs' Exhibit 32 a manually aimed gun for projecting a light flash toward the target? If so, please point it out.

A The manually aimed gun is in the upper left hand corner and is marked IV.

Q What means are shown in connection with the gun for projecting a light flash toward the target?

A There is an electric light marked IV' and the shutter marked IV³.

Q In relation to the statement "Signal Means Actuated by the Current from Said Amplifier if Said Cell Be Struck by a Light Flash," do you find any means in Plaintiffs' Exhibit 32 other than the photoelectric cell and its conductive circuit for actuating the signal means?

A No; no other.

Q Does a flow of current from the amplifier actuate the signal means, and in what sense?

A The flow of current from the amplifier causes the relay R to act and close the circuit to the input source of energy.

Q What is the function of the relay R' and its associated

switch in closing the circuit?

A The relay R' closes the circuit that enables the electric energy to operate the chime sound and the target drop solenoid and the score counter solenoid.

Q Could this signal means be actuated on the diagram here shown if the switch controlled by the relay R' were open?

A It could not.

Q In other words, the closing of the relay R' is, in your opinion, necessary for the actuation of the signal means?

A It is necessary.

Q State whether or not the relay and its associated switch R' are actuated in response to the photoelectric cell when the cell is struck by a light flash.

A The striking of the photoelectric cell by a light flash makes it possible, the only means for making it possible for the relay R' to close the switch on the line that leads into the chime sounds, the target drop solenoid and score counter solenoid.

Q Would it be a correct statement, then, to say that the signal means are actuated by the current from said amplifier if said cell be struck by a light flash; is that a correct and applicable description of the structure in Plaintiffs' Exhibit 32?

A That is language that is quite in line with what is used in all the radio field in the same sense that the incoming signal from the ether produces the sound, precisely the same.

Q In your opinion, would an ordinarily qualified electrical engineer have any difficulty in understanding that the language I have just quoted to you, which is language from claim 1 of the patent in suit, means what you have described as meaning?

MR. TREEDY: I think that question is objectionable too, your Honor.

THE COURT: Sustained.

MR. PARKER: Q I will read you this language from claim 1, "Signal means actuated by the current from said amplifier if said cell be struck by a flash of light." In view of your experience in the electrical field and with electricians, please state whether or not you can find circuits or mechanisms responding to this language of this clause of the claim in Plaintiffs' Exhibit 32.

A That language unquestionably would mean to me, and unquestionably, I think, to anyone familiar with the field, exactly the condition shown in this diagram. At least, the conditions in the diagram are described by the language read from the patent claim.

Q Referring still to Plaintiffs' Exhibit 32 and to claim 2

of the patent in suit, which I hand you, Plaintiff's Exhibit 12, I will read from claim 2: "A shooting gallery comprising a traveling target." Do you find in Plaintiffs' Exhibit 32 or any of those other exhibits which are before you, a traveling target?

A The traveling target is in 36, marked I and III and connected parts. In 37, I, III, III³, 30 and 34, and in Exhibit 32 it is marked I and also "Photo Cell," in the upper right hand corner.

Q Still reading from claim 2: "a driving motor for said target." Will you please point out this driving motor if you can in Plaintiffs' Exhibit 32 or the other exhibits.

A In 32, near the center of the sheet, a circle marked "Motor," also V., and, if you can, please point it out, using

Q Still reading from claim 2 I quote: "a gun having an electric source for projecting a flash of light at said target."

A In Exhibit 32, in the upper left hand corner is the gun marked IV.

Q Do you find any light source in that gun?

A In that gun there is a light source, marked IV'.

Q Still reading from claim 2, I quote: "A trigger switch on said gun for effecting completion of a circuit through said light source."

A Near the upper left hand corner of Exhibit 32 is a trigger switch marked IV².

Q Please state the relationship or the mode of operation of this trigger in relation to the light source IV¹.

A The trigger switch is mechanically connected to the diaphragm in the barrel of the gun marked IV³.

Q Please state what happens to the member marked IV³ when the trigger structure you have described is pulled?

A The diaphragm rotates and momentarily opens the barrel of the gun to the light source.

Q Still reading from claim 2: "means for establishing a circuit for said motor, including a shot limit switch." Please state whether or not you can find this, for example, in Plaintiffs' Exhibit 32, and, if you can, please point it out, using the symbols marked on the exhibit.

A I do not quite understand. Do you want the circuit traced; is that the idea?

Q Yes. Please trace out the circuit for the motor.

MR. PARKER: Read the question.

(The last two questions were read)

A Let us start at the source of energy at the bottom of the center of the sheet.

THE COURT: On Exhibit what? this, for example, is

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A On Exhibit 32.

THE COURT: Proceed.

A There is a lead c', following up to a little above the center of the sheet to c-2 through c-3, through the closure of the circuit by pulling the trigger to c-4. Excuse me. Do you want this? I would like to ask a question.

THE COURT: You do not understand his question, is that it?

A This diagram is marked up for the result of a hit and I thought he was asking me about the result of the trigger pull.

MR. PARKER: Use any of the exhibits. Which is that?

A If I may change over to Exhibit 31, which is better adapted to this. There are a good many lines on here and I am off on the wrong circuit.

THE COURT: All of those exhibits are for you, Doctor.

MR. PARKER: Use any one you wish.

THE WITNESS: Let me complete the answer.

MR. THREEEDY: I wonder if we might have the question reread.

THE COURT: Read the question so counsel may understand it.

(The record was read as follows: "Q Still

reading from claim 2: "means for establish-

ing a circuit for said motor, including a

shot limit switch." Please state whether

or not you can find this, for example, in

Plaintiffs' Exhibit 32, and if you can, please point it out, using the symbols marked on the exhibit. A I do not quite understand.

Do you want the circuit traced; is that the

idea? Q Yes. Please trace out the circuit for the motor.")

A On Plaintiffs' Exhibit 31, starting at about the center of the sheet, at the bottom of the lead b', going up a little beyond the center of the sheet to b-2, then along b-3, then through the switch closed by the pull of the trigger to b-4 and b-5.

I would like another question.

THE COURT: Better restate your question. The Doctor doesn't seem to understand what you are driving at.

MR. PARKER: Q I will read the entire last part of the claim and let you follow it: "means for establishing a circuit for said motor including a shot limit switch having electrical actuating means which must be successively operated to finally open said shot limit switch."

THE COURT: What is your question, now?

MR. PARKER: Q Please trace on any one of the exhibits before you, if you can, a circuit of which this language is descriptive.

THE COURT: Do you understand that now, Doctor?

A Yes, sir.

The circuit is closed through the motor by the insertion of the coin which closes the coin switch, and on Exhibit 30, starting at the source of energy a', pass up to a little beyond the center of the diagram a-2, then to a-3, and then over to a-4, which is adjacent to the coin switch which leads into the coin switch a-4, through the coin-operated switch to a-5 and a-6, all on Exhibit 30; a-7, then through a-8 and a-8' to a-9. Those things close the magnet, - I am not able to identify which one it is because they are too far apart, - close the circuits at a-18 and a-14. The circuit is marked VI. Then continuing with a-9 to a-10, a-11 and then back to the source of energy, but there are branches there. I have the switch closed. Then the circuit down to a-9 and on through a-10 and a-11 and back to the source. That closes the switch marked VI.

Now, if I go back with those switches closed to the input, starting at a', about the center of the diagram, through the motor, through the closed switch by the wire marked a-14, back through a-15, down through a-11, a-12, to the source of energy, together closing that switch and the circuits indicated previously, a means for establishing the circuit for said motor up to that point.

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Do you wish me to go on?

MR. PARKER: I will ask another question.

THE COURT: Have you fully answered the question?

A I am not sure whether I have or not. There is a little more to answer.

MR. PARKER: Finish your answer, please.

A Including a shot limit switch, having electrical actuating means which must be successively operated to finally open said shot limit switch. The shot counter solenoid is shown a little to the right of the center of Exhibit 31, and at each pull of the trigger that solenoid operates and advances a mechanical mechanism. Other drawings show schematically how it operates. In drawing Exhibit 38-A the solenoid operates to advance the ratchet marked VI² and after it has advanced so that the mechanism marked VI enters a notch in the rotating disk marked VI³, the circuit is broken and the switch is opened.

That answers "means for establishing a circuit for said motor including a shot limit switch having electrical actuating means which must be successively operated to finally open said shot limit switch."

Q Reading again from the claim: "and a circuit for said

electrical actuating means controlled by said trigger switch. Please trace on any one of the exhibits the circuit or circuits responding to this language of the claim.

A On Exhibit 31, starting at the bottom of the sheet, on the line marked b', through b-2, through b-3 and then through the switch controlled by said trigger switch to b-4, through b-5, through b-6 and b-6' to b-7, which, together with b-6', complete the circuit through the shot counter solenoid which controls the shot limit mechanism. It advances the cam step by step until the circuit is broken.

Q In relation to the discussion you made of the trigger switch as shown in claim 2, I hand you United States Patent No. 1,541,294 to Doucet, and ask you to read the passage underlined, beginning with line 65, and terminating with line 70 of page 1.

A (Reading):

"The electric lamp may be switched in only at the moment of firing, or the source of light may be normally obscured by a shutter which is operated to permit of the projection of the beam at that moment."

Q Please state what that passage indicates to you.

A That means that the two methods of obtaining the flash of light are regarded as equivalent.

MR. PARKER: This patent is offered in evidence as Plain-

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tiffs' Exhibit 19 and the reporter is requested so to mark it.

THE COURT: Any objection?

MR. THREEEDY: Of course, if the Court please, there is no objection except the statement that I advise the Court that that patent will be a copy of prior art books which the defendant will introduce and we will have a repetition in that patent.

MR. PARKER: With the understanding that the patent will be put in anyhow, the plaintiff withdraws the offer of the exhibit.

THE COURT: This is just the same sort of a situation we had here yesterday. It is always my experience that it is best to allow the plaintiff to make out his case and the defendant to make out his case.

I will sustain the objection.

MR. PARKER: You mean this is not admitted.

THE COURT: No. The objection is sustained at the present time.

MR. PARKER: Q Referring to claim 10, I read the language:

"A shooting gallery comprising a movable target and means for moving the target."

Please point out on any of the exhibits before you, if you can find them, the movable target and the means for moving the target, and please state your understanding of what

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the term target means in relation to the structures shown in these exhibits.

A In Exhibit 36 the moving target is designated, at least in part, by III, and in Exhibit 37 by I, III, III³, 30 and 34. On Exhibit 32, in the upper right hand corner, I, which is identified as a part of the target.

Q Please point out the means for moving the target.

A In Exhibit 30, near the center of the sheet, is the motor marked "Motor" and also V.

Q Please point out the drop operatively associated with the target.

A On Exhibit 36 by III, and better on Exhibit 37, the entire structure, III, III³. No. The structure III and 30 and 34 are movable together.

Q Can you find in any of these exhibits, for example in Plaintiffs' Exhibit 37, means for releasably holding the drop in raised position?

A The means in the drawing reads "a vertical rod III²."

Q The claim includes the language, "said target being provided with an aperture." Please point out the aperture if you can find it.

A In Exhibit 37 the aperture is marked III³.

Q In what member is the aperture?

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A The aperture is in the target.

Q What part of the target?

A Well, the movable part. It is all movable.

Q I read from the claim again: "means for releasably holding the drop in released position." What part of the structure is the drop?

A The drop is III, 30 and 34, and the means, did you ask me for means?

MR. PARKER: No. action of the solenoid is to raise the 30.

Q I read further from the claim: "a light-sensitive cell carried by the target and movable therewith." Do you find on Plaintiffs' Exhibit 37 or elsewhere, any elements responding to this language?

A On Exhibit 37 the light sensitive-cell is marked I.

Q The claim further includes the language: "said cell being aligned with said aperture and positioned to be struck by a flash of light accurately directly at the target." Please point out, if you can, on Plaintiffs' Exhibit 37 or elsewhere, parts responding to this language.

A On Exhibit 37 the light-sensitive cell marked I, the aperture III³ are shown in horizontal line with dashes from the right indicating the course of a beam of light.

Q I read the language from the claim: "and means operatively"

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connecting the drop holding means and said light-sensitive cell whereby when a flash of light impinges on said cell the holding means is actuated to release the drop to indicate a hit." Can you find in Plaintiffs Exhibit 37 or elsewhere, any structure to respond to this language? If you can, please point it out.

A In Exhibit 37 there is, near the center of the sheet, a solenoid marked III⁴ which operates a lever marked 31, which pivots at 32. The action of the solenoid is to raise the left hand end of the horizontal arm marked 31 and lower the right hand end which is connected with the vertical rod III². When the solenoid acts the right hand end of the horizontal rod is lowered, lowering vertical rod III², which permits the drop to rotate as a consequence of the action of a spring marked 35 and the gravity of the member marked 34.

Now, as to the action of the solenoid.

On Exhibit 32, starting with the photoelectric cell at the upper right hand corner there are two leads downward marked c-15 and c-16 connected into movable contacts marked c-14 and c-17. The movable contacts have contact with the stationary contacts marked c-13 and c-18. They lead into the amplifier marked c-12 and c-19.

The details of the amplifier are not given but they

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are so generally known that we know that in order to function these leads in effect control what may be and often is described as valves, which permit a flow of current from the source of energy through the amplifier and the relay R to close the switch 17. With the switch 17 closed the circuits operate the target drop solenoid marked in Exhibit 32 as III⁴.

It remains only to trace the circuits, the circuits that operate the solenoid.

In the first place, with the switch closed by the relay R, the circuit passes through the relay R' between c-17 and c-6, which closes the switch on c-7'. Then the circuit is open through the target drop solenoid and the solenoid acts.

Q Please, if you can, find the target drop solenoid III⁴ which you have testified about in Plaintiffs' Exhibit 32, on Plaintiffs' Exhibit 37.

A The target drop solenoid marked III⁴ in Exhibit 32 is near the center of the diagram on Exhibit 37 and is also marked III⁴.

Q Reading from claim 11, and without repeating the language of the two claims, which is identical, I quote the following: "a gun having a light source for projecting a flash of light." Will you please find that on Plaintiffs' Exhibit 32 or elsewhere.

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A In 32, the gun is in the upper left hand corner, marked IV.

Q Please identify the light source.

A The light source in the gun on the same exhibit is marked IV'.

Q Reading further from claim 11, it states: "trigger mechanism for controlling the light source." Do you find such trigger mechanism in Plaintiffs' Exhibit 32 or elsewhere?

A The trigger mechanism is marked IV².

Q Please state how this trigger mechanism controls the light source.

A It controls the light source by mechanically operating the diaphragm IV³.

Q Reading further from claim 11: "shot limiting means associated with the gun, means effective to deenergize the target moving means in response to a predetermined number of operations of the trigger." Please find that structure, if you can, in any of the exhibits before you.

A A little to the center or right at the center, in Exhibit 31, is the solenoid marked VI', which is in a circuit when the trigger closes the switch. The circuit was previously traced. The solenoid operates a rotating cam disk represented in Exhibit 38-A by VI². The cam disk advances one step for each

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pull of the trigger. When the cam disk has turned to such a position that in Exhibit 38-A VI enters the notch VI³, the circuit is broken and the mechanism comes to rest.

Q State whether or not when that takes place the motor ceases to rotate.

A When that happens the motor ceases to rotate because the circuits are broken near the point marked VI in Exhibit 31 or 32.

MR. PARKER: That is all. Also, did you say?

THE COURT: You may cross-examine.

CROSS-EXAMINATION
By Mr. Threedy:

Q Dr. Moulton, I believe in the earlier part of your testimony, in response to a question propounded to you by counsel, you advised the Court and you advised counsel that you were only familiar with the defendant's machine and the plaintiff's machine in a general way; is that correct?

A As far as the operation of the machine is concerned.

Q Does your testimony given at that time apply to the mechanical structure of the machine?

A My testimony depends on my general knowledge of the purpose and general operations of the machine and the structural

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and electrical elements set forth in the exhibits.

Q How was your knowledge of the subject matter that you have just testified to obtained?

A The knowledge of the operation of the plaintiff's machine is from seeing machines on various occasions and of the defendant's machine from one visit. As far as the operation is indicated by the wiring diagrams and the mechanical diagrams, I obtained that by examining them.

Q By examining the diagrams, did you say?

A Yes, sir.

Q But so far as the subject matter of these diagrams is concerned, you made no comparison between the defendant's machine and the diagrams as shown on these various exhibits which you have testified to; is that correct?

A Not in my testimony.

Q Did you ever take these various diagrams regarding which you have testified and make a comparison of those diagrams with the defendant's machine?

A I have not.

Q So then, I am correct in stating, Doctor, that your testimony is merely based upon your understanding of the circuits as they are shown in these diagrams and not as shown in the defendant's machine; is that right?

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A I have not examined the wiring of the defendant's machine.

MR. THREEEDY: I will ask the question to be reread, with the Court's permission --

THE COURT: Read the question.

MR. THREEEDY: I would like to have the witness answer it yes or no.

THE COURT: Kindly read the question.

(The question was read)

THE WITNESS: May it be read once more, Judge?

THE COURT: Kindly read the question.

(The question was reread)

A That is correct.

MR. THREEEDY: Q Doctor, you did testify that you made a general observation of both the defendant's and the plaintiff's machines; is that right?

A Yes.

Q During the testimony offered by you on direct-examination in effect you testified that the signal means of the defendant's machine was actuated by current from the photoelectric cell amplifier; is that correct?

A It is not.

Q What did you testify to, Doctor?

A I stated that the current from the photoelectric cell amplifier through relay R closed the switch.

Q Did you offer any testimony on direct-examination as to how the signal means of the defendant's device was actuated?

A Yes, sir.

Q How do you know how the signal device of the defendant's machine is actuated?

A From the wiring diagram.

Q Refer to the diagram that you have reference to.

A Exhibit 32 shows it.

Q Did you testify that the circuit of the signal means of defendant's device was actuated by the relay of the amplifier as illustrated in Plaintiffs' Exhibit 32?

A No.

Q What did you testify to, Doctor?

A That the relay closed the switch.

Q Closed the switch?

A Yes.

Q After the switch is closed, what happens?

A Then the circuit is open from the power line.

Q From the power line to where?

A Through the switch that is closed by the relay R.

Q What does the switch relay R do?

A The relay R closes the switch.

Q And after the switch is closed what happens?

A Then the circuit is open from the power line that is connected with another relay and the signal means.

Q What closes the relay R of Plaintiffs' Exhibit 32?

A The current from the amplifier.

Q What steps up the amplifier to actuate the relay R of Plaintiff's Exhibit 32? It is established through the relay R.

A The electrical impulse from the photoelectric cell controls the action of the tubes of the amplifier. I speak now in general terms because amplifiers are extremely common. Those tubes that act as a valve, and in effect is a valve, admit current from the source of energy at the bottom of the center of the sheet. energy?

Q If your testimony is correct, when a flash of light impinges on the photoelectric cell of Plaintiffs' Exhibit 32, an impulse is transmitted to the amplifier and a circuit is set up which closes the relay R, that relay closes the circuit of relay R'. Then under those conditions, when relay R' is closed and the light flash impinges on the cell, the signal ought to operate; is that correct?

A I do not know that I agree with the sequence of the statement that you make.

Q You explain it then, in your own terms, giving an answer to the question that might be gathered from my statements.

A When light impinges on the photoelectric cell ^{very} minute electrical impulses are sent in to the amplifier, which, through normal application of an amplifier, of which there are many, many forms, the relay R operates to close the switch adjacent to it. Then the switch being simultaneously closed at the gun trigger, a circuit is established through the relay R'. I speak of these as though they came sequentially. They are practically instantaneous. R' closes the switch and the circuit thereby is opened through the score counter and the drop solenoid and the chimes.

Q When the signal was energized from where did it receive its source of electric energy?

A Which signal was energized?

Q The signal which we are talking about and which you are testifying concerning, and as shown in Plaintiffs' Exhibit 32, the signal means.

A You mean chime sounds, for example?

Q Yes, let us refer to it as that.

A The energy that does the work comes in from the power line.

Q Is the power line indicated on Plaintiffs' Exhibit 32 at the 110 volt input?

A I see "Source of Energy" at the bottom. Oh, yes, 110 volt input.

Q Then I am correct in this statement, am I not, Doctor, that the signal means III' of Plaintiffs' Exhibit 32 is actuated by current from the power line indicated by the 110 volt input; is that correct?

A I cannot answer a question of that sort categorically yes or no without supplemental explanations and tell the whole truth.

Q I want you to answer that question, with the Court's permission, in accordance with your understanding of the disclosure of the wiring diagram in your possession and as identified as Plaintiffs' Exhibit 32.

A In order to make this clear, I should like to make a comparison --

MR. THREEDY: May I request the witness first to answer the question as I have propounded it to him and then let him explain later.

THE COURT: Kindly read the question.

(The last two questions were read)

A That is correct, subject to supplementary explanations, which I hope I may put in.

THE COURT: Proceed with your questions.

Moulton-cross

THE WITNESS: Have I a right to explain?

THE COURT: Just a moment.

MR. THREEEDY: Now look at Plaintiffs' Exhibit 37, You have Plaintiffs' Exhibit 37 before you, have you, Doctor?

A Yes, sir.

Q What, in your opinion, holds the target indicated by III in a raised position?

A The pivot, not marked, and the member marked III².

THE COURT: I think at this point we shall have to suspend until two o'clock.

Q Dr. Moulton, you testified this morning in response to a question which I propounded to you, that the current which energizes the signal means of Plaintiffs' Exhibit 32 as having its origin in the main input or 110 volt line indicated on the exhibit in question; is that correct?

A Not quite.

Q What did you testify to, Doctor?

A I said the current, the energy of which actually moves the signal, had its origin in the main input.

Q The electric energy, then, of the signal means of Plaintiffs' Exhibit 32 has for its origin the main input, the 110 volt line; is that correct?

A That is correct.

Thursday, May 28, 1936

2:00 o'clock p. m.

Court convened pursuant to recess.

PRESENT: Messrs. Norman S. Parker
Francis W. Parker, Jr.
Threedy

F O R E S T R . M O U L T O N ?

resumed the stand for further cross-examination by Mr. Threedy.

(The question was read)

Q Dr. Moulton, you testified this morning in response to a question which I propounded to you, that the current which actuates the signal means of Plaintiffs' Exhibit 32 as having its origin in the main input or 110 volt line indicated on the disclosure in Plaintiffs' Exhibit 32? Just answer the question yes or no.

A Not quite.

Q What did you testify to, Doctor?

A I said the current, the energy of which actually moves the signal had its origin in the main input.

Q The electric energy, then, of the signal means of Plaintiffs' Exhibit 32 has for its origin the main input, the 110 volt line; is that correct?

A That is correct.

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Q Now, Doctor, in the light of the disclosure in Plaintiffs' Exhibit 32, with the testimony in mind, state whether or not the following description which I now read to you is or is not an apt description of the current which actuates the signal means as shown on Plaintiffs' Exhibit 32, "Current from the Photoelectric Cell Amplifier." Just answer the question yes or no.

MR. THREEEDY: May I have that question read?

THE COURT: Kindly read the question.

(The question was read)

A I cannot answer the question because of so many undefined terms in it, by yes or no.

MR. THREEEDY: Q Can you answer the question in the light of the disclosure in Plaintiffs' Exhibit 32? Just answer the question yes or no.

A I cannot answer it.

MR. THREEEDY: I did not get your answer.

A I cannot answer it with yes or no.

Q In the light of the disclosure of Plaintiffs' Exhibit 32, do you know whether the description "Current from a Photoelectric Cell Amplifier," in view of your previous testimony, is an apt description of the current which actuates the signal means of Plaintiffs' Exhibit 32: "Current from a photoelectric Cell Amplifier." Please answer that question yes or no.

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A For the same reason I cannot answer.

THE COURT: I don't believe he understands your question.

MR. THREEEDY: Q Do you understand my question, Doctor?

A I understand your question, I think, and undefined terms in it, subject to various usage, that is the reason I cannot answer it.

Q Let me ask you this question: Is the current from the main input, the 110 volt line shown on the diagram of Plaintiffs' Exhibit 32, current from the photoelectric cell amplifier? Just answer that question yes or no.

THE WITNESS: Will you repeat that? I think I can answer that.

(The question was read)

A No.

Q That is, it is not current from the photoelectric cell amplifier; is that correct?

A Yes, it is correct.

Q In the light of that testimony and in the light of the disclosure of Plaintiffs' Exhibit 32, state whether or not the following description which I now read to you, is or is not an apt description of the current which actuates the signal means of Plaintiffs' Exhibit 32: "Current from a photoelectric Cell Amplifier."

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A I cannot answer that.

Q Doctor, you testified this morning that Plaintiff's commercial device, with which you are familiar, includes a score indicator; is that correct?

A Yes, sir.

Q Advise the Court whether or not the device of the patent in suit includes a score indicator?

A It does.

Q Doctor, I hand you Plaintiffs' Exhibit 12, the patent in suit, and I will ask you to advise the Court where in that patent you find a score indicator.

A In Figure 4 at the left hand lower corner, 73, 74, 75; 76 I think is part of it.

Q Have you read the descriptive part of the patent in suit, Doctor?

A Yes, sir.

Q Does the descriptive part of the patent in suit state that the elements 73, 74 and 75 constitute a score indicator?

A I do not recall.

Q Refer to the descriptive part of the specification of the patent in suit and find therein where it makes reference to the elements 73, 74 and 75.

A Page 2, line 1, column. I am wrong.

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Q Read the subject matter to the Court.

A Those having reference at that spot is as follows:

"73 refers to a normally open shot limit switch which controls the number of shots which may be 'fired' upon insertion of one coin in switch 70. This limit switch 73 includes a series of contacts 74, a contact arm 75, co-operable with said contacts, ratchet means 76 for advancing said arm 75 step by step along the contacts 74, an actuating coil C' for actuating said ratchet means 76, a detent 77 for holding said ratchet means after each operation thereof, a reset coil C² for releasing said detent 77, and a spring 78 for moving the contact arm 75 to a closed starting position when the detent 77 is released."

Q Does the description which you have read from the patent in suit describe a score counter such as we are discussing?

A The part I read did not describe a score counter.

Q What does it describe, Doctor?

A It describes the shot limit apparatus.

Q Dr. Moulton, according to your understanding of the diagram shown in Plaintiffs' Exhibit 30, is it not a fact that during the operation of the gun shown in Plaintiffs' Exhibit 30 the light bulb IV' is continuously illuminated until after the tenth shot?

A That is correct.

Q Now, Doctor, that being so, then is it not a fact that the shutter IV³ of Plaintiffs' Exhibit 30 in no way functions

for effecting completion of the circuit through the light bulb IV'?

A The electric circuit?

Q That is correct.

A It has no connection with the electric circuit.

Q Have you a copy of the patent in suit, Doctor?

A Yes, I have it.

Q I am sorry, Doctor. I meant Plaintiffs' Exhibit 30.

Please take Plaintiffs' Exhibit 30 in your hand. Now starting out with one side of the light bulb, you may use either side, indicated on IV' of Plaintiffs' Exhibit 30, please trace out the circuit from the main input indicated at 110 volts to the light bulb IV' of the gun shown in Plaintiffs' Exhibit 30.

A Starting with a', vertical line connecting the horizontal line near the center of the diagram marked a-2; that circuit returns through transformer coils a-16 through a-17, a-18, a-11 and a-12. Now to get to the lamp through the transformer marked on Exhibit 30 in pencil T, there is a-19, a-20 and a-21.

Q In tracing out the circuit of Plaintiffs' Exhibit 30 which you have just testified to, you did not pass through the trigger switch of the gun shown in Plaintiffs' Exhibit 30, did you, Doctor?

A No.

Q This morning, Doctor, you testified on direct-examination in answer to a question propounded to you by plaintiffs' counsel, that you understood the drop associated with the target in Plaintiffs' Exhibit 37. Will you please take Plaintiffs' Exhibit 37. If Mr. Parker does not object, I have my copy marked and we can use it for the purpose of this question.

THE COURT: We should have the original.

MR. THREEEDY: Maybe I can frame this question, if the Court please, to avoid the loss of time.

Q Doctor, do you remember the disclosure of Plaintiffs' Exhibit 37?

A I cannot identify it by the number. If I had a chance to look at it -- I cannot quite identify it by the number alone.

MR. THREEEDY: If the Court please, it is agreeable to me, if it is agreeable to Court and counsel, to use this copy, to save time.

THE COURT: Very well.

MR. PARKER: I think we will find this is correctly marked.

THE COURT: The copy that was handed to me has not been completely marked.

MR. THREEEDY: Has not been completely marked?

THE COURT: No, the one I have is not completely marked.

MR. THREEEDY: Could that be it, Mr. Parker?

THE COURT: The originals are not in the court room?

MR. PARKER: Dr. Moulton, by mistake, must have picked up some of the papers and took them to his office with him. His office is at 327 South La Salle Street and I have sent a girl to his office to see if he has left them there.

THE COURT: If we had them here we could save some time. It confuses the record very much to have to testify from copies.

Well, proceed if you can.

MR. THREEEDY: Will you read the question to the witness, please? To make that more understandable, Doctor, I will repeat my question, with the permission of the Court.

Q You testified on direct-examination this morning, under questions propounded to you by plaintiffs' counsel, that you understood the drop associated with the target in Plaintiffs' Exhibit 37 to constitute the elements indicated by III, III', 30 and 34; is that correct, Doctor?

A My memory is that in answer to that I said the drop was the part marked III, III³, 34, and I think there was a 30, it is not marked on here. Oh, yes, it is marked on the other side. I see it, 30 and 34.

Q Now refer to Plaintiffs' Exhibit 37 and point out to the

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Court, using the reference numerals if any be found, on Plaintiffs' Exhibit 37, where you find a target provided with an aperture.

A The target is the whole upper structure, including as parts of it I, III, III³ and associated members.

Q Counsel read to you this morning from claim 1 of the patent in suit, I should say claim 10, Doctor, and at one time he asked you to point out through the medium of Plaintiffs' Exhibit 37, wherein there is disclosed a target provided with an aperture. Now please do that again, Doctor.

A The target is the structure which is referred to in the answer to the preceding question, namely, on Exhibit 37, I, III, III³ and associated members, and the aperture is III³.

Q In describing where in Plaintiffs' Exhibit 37 you find a target provided with an aperture and where in that exhibit you find a drop associated with the target, it ^{was} necessary, was it not, Doctor, to include and make reference to the same elements twice?

A Well, some of the elements were referred to in the answer to the second question.

Q In pointing out where, in Plaintiffs' Exhibit 37, you find a target provided with an aperture, what elements indicated by you in answer to that question were also used in

answering the question to point out in Plaintiffs' Exhibit 37 where you found a drop associated with a target?

A The drop is the member III and 30 and 34 of the specific parts numbered.

Q In Plaintiffs' Exhibit 37 that element indicated at III which you refer to as a part of the drop, state whether or not that is or is not provided with an aperture.

A According to the diagram, Plaintiffs' Exhibit 37, the aperture III³ is in the drop III.

Q Now, Doctor, refer again to Plaintiffs' Exhibit 37 and advise the Court whether or not the rod III² in any way acts upon the target to push it from an upright position into a hit position.

A The rod III² does not move the target drop.

Q In Plaintiffs' Exhibit 37 what causes the element III to move into hit position after the rod III² is moved from latched engagement with the disk 30 as shown in Plaintiff's Exhibit 37?

A Two means are shown, the spring marked 35, and the weight of a member marked 34.

Q Will you refer to the patent in suit, Doctor, and advise the Court what causes the target in the device of the patent initially to move from an upright position into a hit position?

Refer to Fig. 3 of the patent in suit for your explanation.

A The member marked 67 through the member marked 66 acting on 65, which is integral with 48.

MR. THREEEDY: That is all, if the Court please.

THE COURT: Any redirect-examination?

MR. PARKER: Yes, your Honor.

REDIRECT-EXAMINATION

By Mr. Norman Parker:

Q Please state whether or not the drop III of Plaintiffs' Exhibit 37 constitutes part of the target structure about which you have testified.

A My answer is, it is part of the target structure.

Q Please state whether or not the drop III of Plaintiffs' Exhibit 37 constitutes the entire target structure?

A No.

Q State whether or not when the solenoid III⁴ of Plaintiffs' Exhibit 37 is actuated to lift its moving member upwardly, the parts being in the position shown in the exhibit, the drop III is then released?

A Yes.

Q State whether or not the upward movement of the movable solenoid member about which you have just testified in Plaintiffs' Exhibit 37, releases the target drop III by its upward

Moulton-redirect

movement. If not, please state what does release the target drop III.

A Through the means of intervening rods marked 31 in pencil, pivoted on 32, connected at the right hand end with III², it does release the drop target mechanism.

Q In connection with the employment of the term "release" in your testimony, please state what you understand to be the meaning of the word "release" in this connection.

A Release in this connection means the removal of the restraints that prevent the target drop from moving from its fixed vertical position. This mechanism it is correct.

Q You have employed the term "target" and been questioned about it. Will you please state what, in your opinion, the term or word "target" means.

MR. THREEEDY: If the Court please I would like to object to that question. I think the law is well established that the terms of a claim are to be determined in the light of the disclosure of the specifications and drawings of the patent in suit.

THE COURT: Is there any definition of the word target in the claims of drawings, or otherwise?

MR. THREEEDY: It has to be determined by reference to the specification or drawings.

THE COURT: It is a common word, unless there is some special meaning.

MR. PARKER: There is no special meaning to the word "target."

THE COURT: If that is true, the Court will have to make his own guess. I will sustain the objection.

MR. PARKER: Q In connection with your testimony concerning claim 2 this morning, you stated, did you not, that the employment of a shutter for unmasking and masking the light in the gun is the equivalent of the employment of a trigger switch for flashing the light on and off; am I correct?

A In connection with this mechanism it is correct.

Q Please state why you consider these two to be equivalent.

A The question of equivalents, of course, depends upon the purposes, if we are speaking of physical objects, of the objects. The purpose here, the sole purpose, is to produce a momentary flash of light which impinges or may impinge upon the photoelectric cell. In photography there is a corresponding situation. A photograph may be taken by a strong light and a very short exposure controlled by a shutter, or in a dim light with a momentary flash, or in dimmer light by a momentary bright flash. These photographers use in securing photographs. These are equivalents in that each provides a method of controlling illumination of the photographic plates.

I replied in my testimony this morning to the question that these are equivalents for the purposes of these mechanisms because the whole purpose of this part of the mechanism is to produce a flash of light or a beam of light upon the photoelectric cell of short duration. Each accomplishes that end exactly.

Q You still feel that as to claim 2 the shutter and the trigger structure are equivalents?

MR. THREEEDY: That is objectionable, if the Court please. The witness has not been qualified as to his understanding of equivalents. He is not competent to testify.

THE COURT: Sustained.

MR. PARKER: Q Referring to Plaintiffs' Exhibit 12, the patent in suit, and reading claim 1 in part, I note the term "signal means actuated by." --

A Which claim is that, please?

Q Claim 1, "signal means actuated by the current from said amplifier." Will you please refer to Plaintiffs' Exhibit 32 and state whether or not this phrase is an actual description of any part of the structure shown in the exhibit.

A With my understanding of the word "actuated" in such connections, it is a correct description.

Q Will you please point out how the current from the ampli-

fier does actuate the signal means.

A The current from the amplifier through the relay R in Exhibit 32 closes the circuit which actuates the amplifier, closes the circuit which carries the energy.

Strike that out. Not actuates the amplifier. It closes --

MR. THREEEDY: I object to taking it out.

THE COURT: Proceed.

A The relay R closes the circuit that carries the energy, the energy from the input source which operates the signal mechanisms.

MR. PARKER: Q What function, if any, does the relay R' perform in closing the circuit for the signal means?

A The relay R' closes the circuit through connections in line c-7'.

Q Referring to the normal operation of the device as shown in defendant's wiring diagram, Plaintiffs' Exhibit 32, is it normally possible to actuate the signal means if the switch controlled by the relay R' is open?

A The signal means will not function if the switch operated by the relay R is open, or R' either.

Q Are any means shown in Plaintiffs' Exhibit 32 for actuating the signal means when the photoelectric cell is not

energized.

A If the photoelectric cell is not energized the signal means will not operate.

Q You have been asked some questions as to the operation or the nature of the photoelectric amplifier employed in this circuit. Can you state generally what is the function of such an amplifier in such a circuit?

A An amplifier in such a circuit as this, which is in function essentially like those used in radio, is a mechanism for transmitting energy in a controlled way. For example, if the small energy communicated to the amplifier from the photoelectric cell or from the ether in the case of the radio, controls what in effect is a valve system, it permits energy from the main source to flow through, and the characteristics of the energy which flows through in variation are similar to those of the input energy from the photoelectric cell or from the ether, but are normally much greater in quantity. So to call it an amplifier is, in a certain sense, a misnomer, but it is in universal use in fields where such electrical apparatus is used.

Q Does an amplifier create energy?

A An amplifier does not create energy. That would run contrary to the law of conservation of energy.

Q Does an amplifier increase the energy of whatever signal or impulse is received by it?

A The amplifier does not increase the energy directly. It does not increase the energy from such a source as the photo-electric cell in this case or from the ether through the antenna in radio, but those sources of energy control the valve part or function of the amplifier.

Q What do you mean when you say that the current from the amplifier actuates the signal means?

MR. THREEDY: If the court please, the question is objected to unless it is confined to the disclosure of the patent in in suit.

THE COURT: You are inquiring about a particular exhibit now?

MR. PARKER: I am referring to Plaintiffs' Exhibit 32.

THE COURT: He may answer.

THE WITNESS: The question again, please.

(The question was read)

A The current from the amplifier puts into effect a series of steps which lead to the operation of the signal means.

MR. PARKER: Q Am I right in my understanding that the result of the flow of the current from the amplifier is the actuation of the signal means?

A Yes, there would be an actuation of the signal means.

Q In that sense, is it correct to say that the current from the amplifier actuates the signal means?

A In the way the word "actuates" is shown as used in this field, it would be correct.

MR. THREEEDY: I object to that answer, your Honor. The witness said "in this field." I think the question and the answer should be confined to the disclosure of the patent in suit.

THE COURT: The objection will be sustained. The answer will be stricken out.

MR. PARKER: Q In reference to the structure of the Plaintiffs' Exhibit 32 and in relation to the language of the claims relied upon in the patent in suit, for example, claim 1, is it correct to say that the signal means is actuated by the current from said amplifier?

A Yes, that is correct.

Q What do you understand to be the basis or source of the diagrams from which you have been testifying, for example, Plaintiffs' Exhibits 31 to 33 and Plaintiffs' Exhibit 34?

A I understand they are photostatic enlargements of a blue print furnished by the attorney for the defendants and signed in the lower left hand corner, or at least printed in the lower left hand corner as being such.

Q Have you had any opportunity to check the relationship

of the structures shown in these wiring diagrams with defendant's machines as you have seen them?

A I have not had opportunity to check the diagrams against the actual structure of the machine.

Q Is there any inconsistency between the diagrams and the machine as you saw it operate, so far as the steps or operation of the machine are concerned, so far as you have seen it operate?

MR. THREEEDY: I object to that question. Counsel has just shown that the witness is incompetent to testify to that.

THE COURT: He qualified that in the latter part of his question by comparing the diagrams with what he had seen of the defendant's machine.

MR. THREEEDY: I withdraw the objection.

A The wiring diagram is wholly consistent with the things that happened when the machine was operated in my presence.

MR. PARKER: That is all.

THE COURT: Any further recross-examination?

MR. THREEEDY: No, if your Honor please.

THE COURT: I think it is only fair to the Doctor to give him an opportunity at this time, if he so wishes, further to answer the question which he answered in part by "Yes."

Do you want to make any further explanation?

MR. THREEDY: I would like to ask that he confine his answer to the disclosure of the patent in suit and the defendant's device.

THE COURT: You propounded to him a certain question which you asked him to answer yes or no.

MR. THREEDY: That is right.

THE COURT: He answered yes with qualifications. I did not permit him at that time to enter into an explanation, but stated to him privately after the session this morning that a proper explanation might be given in answer to questions propounded by the plaintiff. Plaintiffs' counsel, I don't believe, has propounded the questions.

MR. THREEDY: That is right.

THE COURT: I want to give him an opportunity to make the explanation.

MR. PARKER: I would like to have that question reread.

THE COURT: Have you it in mind?

THE WITNESS: I do not have it exactly enough in mind to testify about it.

MR. PARKER: Q. This morning you were asked, I believe, in yes or no form, the question of whether or not the signal means as shown for example, on Plaintiffs' Exhibit 32, was actuated by the main source of energy shown at the bottom of

Plaintiffs' Exhibit 32, and including the lines c-' and c-11.
 You wished to answer this question with some qualifications.
 Will you please now answer it as you wished to at that time.

A The qualifications are essentially the following: The operation of the signal means is due to independent sources of electric energy, both of which must operate, namely, the electric energy derived from the photoelectric cell when it is acted on by light and the electric energy from the general power source. With neither one alone would the signal means operate.

The thing that is peculiar and important here is that the electric energy is derived from the photoelectric cell, the same as it is in a radio. The thing that is of particular importance is that the electric energy comes in through the ether and is picked up by the antenna of the receiver set, but the ordinary radio will not work unless, in addition, it has a source of energy properly handled to operate the loud speaker.

MR. THREEEDY: If the Court please, I desire to move to strike the witness' answer on the ground that he has gone outside of the four corners of the patent in suit to get an interpretation of what was meant by the question propounded to him.

It is well established in patent law that the term and expressions of the claims must be determined by the specification and drawings, that is, the disclosure of that patent.

MR. PARKER: The witness has been qualified as a technical and electrical expert and he should have a right to define terms in relation to the patent, and if it is necessary to use outside parallels, he should be allowed to do so.

THE COURT: The explanation goes somewhat out of the reference to this particular exhibit, but I will let the answer stand. I presume it will be qualified by further examination. The answer may stand.

MR. PARKER: Q In connection with your foregoing answer, and with the understanding that a source of power such as outside lines C' and C'' is necessary for the operation of the device shown in Plaintiffs' Exhibit 32, do you still feel that in reference to claim 2 of the patent in suit it is accurate to describe the signal means as actuated by the current from the amplifier?

A I do.

MR. PARKER: That is all.

THE COURT: Any recross-examination?

MR. THREEDY: Yes, your Honor.

RECROSS-EXAMINATION

By Mr. Threedy:

Q Now, Doctor, answering this question as to your understanding of the patent in suit, the statement in claim 1 of the patent in suit to the effect, "signal means actuated by the current from the photoelectric cell amplifier," doesn't that mean that the current must pass through the amplifier before it reaches the signal means to energize the signal means, to give a signal?

A Is this a yes or no answer?

Q I will be fair with you, Doctor. You can answer it any way you wish, but confine your answer within the patent in suit.

A All right. It hangs upon the usage of the word "actuated," and since I am limited to this I cannot make use of the fact that it has a usage in many fields. In my opinion, it would not be necessary for the current itself to flow through to the sound operating mechanism in order to have the description that the current from the photoelectric cell actuates the sound mechanism.

Q Doctor, do you not put any importance upon the expression "current from the photoelectric cell amplifier"?

A I did not see -- Where was the photoelectric cell amplifier referred to?

Q We are speaking of the description of the device of claim 1 of the patent in suit. It is described as a signal means actuated by the current from the photoelectric cell amplifier.

THE WITNESS: Now the question, please.

Q Does not that statement, "current from the photoelectric amplifier," mean that the current should come from the amplifier?

A Let me read this:

"In a shooting gallery, a traveling target having a photoelectric cell, a photoelectric amplifier,"

I see no reason in this to speak of the current from the photoelectric amplifier.

Q Is the device of claim 1 described in part as having signal means actuated by the current from said amplifier?

A I do not think it is indicated.

Q Will you read claim 1 of the patent in suit to the Court?

A (Reading):

"In a shooting gallery, a traveling target having a photoelectric cell, a photoelectric amplifier, means operatively connecting said cell and amplifier, said connecting means including stationary contact means, and traveling contact means engaging said stationary means and movable with the target, signal means actu-

ated by the current from said amplifier if said cell be struck by a light flash,"

Q Thus far in reading claim 1 did you not read from the claim the statement that I made just a moment ago, signal means actuated by the current from said amplifier"?

A I read that. Yes, I read that right now.

Q The statement in claim 1, "current from said amplifier," doesn't that mean that the current passes through the amplifier?

A No, not necessarily at all. The signal means actuated by the current. Whether it is done by the current flowing through the amplifier or whether it actuates some mechanism that indirectly operates the signal means is left entirely open, so far as I see it.

Q If we disconnect the leads c' and c-11 from the main input on Plaintiffs' Exhibit 32, will the signal be actuated when the photoelectric cell is impinged by a flash of light?

A It will not.

Q Will you explain why it will not?

A There is no current flowing in the solenoids that actuate the signal means adequately to operate.

Q If we disconnect the relay 37 from the circuit with the signal means --

THE WITNESS: I cannot find 37. Excuse me.

Q I beg your pardon. That is R', I am sorry, R' of Plaintiffs' Exhibit 32, and a flash of light impinges on a photo-electric cell, will the signal means be actuated?

THE WITNESS: Please repeat the first part, I didn't quite get it.

MR. THREEEDY: I will have the reporter read it.

(The two preceding questions were read)

A No.

Q Explain your reasons for that.

A It will not be actuated because the circuit through c-7' will be open.

Q Now, Doctor, look at Plaintiffs' Exhibit 32 and at the lower left hand corner of the amplifier you will find two black lines leading from the lines c' and c-11 to the amplifier. Will you please indicate them by x and y.

A (Witness does as requested)

Q Do those lead wires x and y of Plaintiffs' Exhibit 32 supply energy to the amplifier?

A Yes, I understand they do.

Q When we disconnected the relay R' of Plaintiffs' Exhibit 32 there was a current or energy flowing into the amplifier; was that right?

A Through x and y?

Q Yes.

A Yes, sir.

Q That being so, Doctor, and relay R closed, or the switch of relay R closed of Exhibit 32, if you are correct in stating that the current from the amplifier will actuate the signal, should not the signal then actuate with the relay R' removed?

A No.

Q Explain your reason for saying that.

A The fundamental reason is that two cooperating but distinct elements are involved in completing the circuit that carries the energy that operates the score counter solenoid and the target drop solenoid.

Q We are referring to the signal means, Doctor, on Exhibit 32.

A Well, the signal means.

Q Now, the relay is in the circuit, that relay R' of Plaintiffs' Exhibit 32 is in the circuit, the switch thereof is closed, the lead c-8 is broken, the amplifier is now receiving current from the main line through the feed lines x and y, relay R', I should say relay R of Plaintiffs' Exhibit 32 is closed. Now state whether or not the signal means of Plaintiffs' Exhibit 32 is actuated by the current flowing into the amplifier and therethrough.

A If the amplifier is of the normal type of amplifier, it would not. It is wholly undescribed, so I have to assume it is a normal amplifier.

MR. THREEEDY: I move to strike out the answer.

THE COURT: What was that?

MR. THREEEDY: Read the question.

THE COURT: Yes. Read the question and answer.

(The question and answer were read)

THE WITNESS: There is not enough information about the amplifier given to enable me to answer that positively.

MR. THREEEDY: Q Let me ask you that same question, Doctor, in the light of the drawing of the patent in suit.

A Which drawing is that?

MR. THREEEDY: Fig. 4.

A The question involves certain reference numbers that I do not find here.

Q You find 42 on Fig. 4 of the patent in suit, Plaintiffs' Exhibit 12, do you not?

A Yes. I find 42; yes, sir.

Q Let us assume that the lead 42 is broken. Let us assume that the relay switch of relay 79 is closed. State now whether the signal 83 will be energized and actuated by current passing into and through the amplifier 80.

A I would like to have it read as to all of these reference numbers.

MR. THREEEDY: Please read the question.

(The question was read)

A I am sorry. I cannot find 83 now.

MR. THREEEDY: It is about the middle of the page there, Doctor, on the right hand side.

A I cannot answer that in a moment. I will have to trace out the details of it further. I can do it in just a moment.

MR. THREEEDY: Take your time, Doctor, with the approval of the Court.

A My answer is, that if the circuit were broken in 42 the signal 83 would not function.

MR. THREEEDY: That is all, if the Court please.

MR. PARKER: That is all. Is the present controversy?

THE COURT: Call your next witness.

A L V A J. C A R T E R,

called as a witness on behalf of the plaintiffs, having been first duly sworn, testified as follows:

DIRECT-EXAMINATION

By Mr. Norman Parker:

Q Please state your full name.

A Alva J. Carter. I state that upon objection, if the Court

Q Your age?

A Fifty-three.

Q Your address?

A Number 361 West Superior Street, Chicago.

Q Your present occupation?

A President of the Carter Motor Company, Chicago.

Q Have you any interest in the present controversy?

A None whatever.

Q Please state whether or not you are familiar with target rifle ranges manufactured by or for Phoebus Corporation or Rayolite Rifle Range Company.

A In a general way; yes.

MR. THREEEDY: Just one moment. I think that question is objectionable, too, your Honor, as being irrelevant and immaterial, and not concerning the device that is in issue

before the Court.

THE COURT: I presume it is preliminary. I will let it stand for the moment.

MR. PARKER: Q Do you see in the court room any structure substantially responding to the Phoebus or Rayolite machine you have testified you are familiar with in in a general way?

A Yes.

MR. THREEEDY: May I make that same objection, if the Court please? I do not think the question is proper for the reasons I have stated.

THE COURT: It is not in proper form, that is sure. I will sustain the objection.

MR. PARKER: Q Please state when you first saw a machine of the target rifle range type employing a gun shooting a light flash in connection with a target having a photoelectric cell on it.

A About the middle of March, 1934.

Q Please state where you saw this machine.

A Harding's restaurant on Madison Street.

Q In Chicago?

A In Chicago.

Q Did you examine the machine with any care?

A No.

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Q State whether or not you saw any name plate or indication of source or origin or ownership on this machine.

A Well, yes. It was Phoebus Corporation and Rayolite. There were two names used.

Q The names were both on the machine?

A Yes.

Q Can you state generally the circumstances of your seeing this machine?

A Major Frost, of New York, had seen the machine and requested me to accompany him that evening to Harding's restaurant to see this new electric gun machine, which I did.

Q Please state in detail how carefully or carelessly, as the case may be, you examined this machine.

A We operated the machine several times and spent, oh, perhaps two hours with Mr. Froelich, who was in charge of the machine.

Q Did you give Mr. Froelich's full name?

A Morris Froelich.

Q You have stated he was in charge of the machine. Will you tell me how you happen to know that?

A He told us he was in charge of the machine for the Phoebus Company.

Q Please state whether or not you had any access to the

interior of the machine?

A No; none.

Q Did you operate the machine yourself?

A Yes.

Q You have mentioned a certain Major Frost, did you say?

A Yes.

Q Taking you to see the machine?

A Yes.

Q Is he a resident of Chicago?

A New York.

Q Do you know how he happened to be in Chicago?

A He operates coin machines, coin radios, in a number of hotels here.

Q Please state whether or not you yourself have ever made a machine of the target rifle range type, including a rifle shooting a flash of light at a moving target with a photoelectric cell on it?

MR. TREEDY: I think that is objectionable, too, your Honor. It is irrelevant and immaterial to the issues before the Court, whether this witness made one. It has no bearing on this case.

MR. PARKER: In our bill of complaint we set out that there has been a conspiracy to infringe through a certain Morris

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Froelich and Squire.

THE COURT: This evidence is offered on the allegation of conspiracy in your bill; is that it?

MR. PARKER: Yes, your Honor.

THE COURT: Let it be admitted then, subject to the objection.

MR. THREEEDY: What was the ruling?

THE COURT: Admitted subject to the objection.

MR. PARKER: Q State how many of these machines you made.

A One.

Q State about when you made it.

A It was started in April, 1934 and finished in, I think, the latter part of May.

Q Will you please describe this machine generally.

A Well, it was an electric gun that shot a flash of light at a photoelectric cell, at a moving target. After each shot, the shots were counted and each target strike was also counted in the machine, and at the end of ten shots the gun was disconnected so that no further shooting could occur until another coin was inserted in the slot.

Q What means, generally, did you employ to disconnect the machine after the tenth shot?

A We used a ratchet relay, an 11-position ratchet.

Q Did you work personally on this machine?

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A Yes.

Q Did you have any assistants working with you?

A Yes.

Q Can you name any of them?

A Mr. Squire.

Q Please give his full name.

A Nathan Squire. And Mr. Jack Root.

Q Please state what was your first contact with Mr. Squire.

A Mr. Squire worked for me at Carter Radio Company previously, several years ago, and he was employed by Utah Radio Company in 1934. I engaged him to build certain parts of this machine for me during his spare time.

Q Please state from whom he got his instructions as to the details of the machine or the general layout of the machine.

MR: THREEEDY: That is objectionable, too, your Honor. That is calling for hearsay evidence.

THE COURT: What is the question, please?

A I took it. (The question was read)

THE COURT: If the witness gave them, he may answer the question, subject to the objection.

A I did.

MR. PARKER: Q Please state under what circumstances you gave him those instructions.

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A First, I called him over to my office and sketched out the type of machine I intended to build, and from that preliminary sketch or the schematic sketch as you may term it, the first machine was built. Mr. Squire did part of the work and Mr. Root and myself. Of course, from day to day there was various other slight changes and instructions given.

Q Please state whether or not, to your knowledge, Mr. Squire saw one of the Rayolite-Phoebus machines about which you have testified.

MR. THREEEDY: That is objectionable too, your Honor. This witness cannot testify whether Squire saw a certain machine.

THE COURT: The question is not objectionable. His answer may be. He may answer.

THE WITNESS: Will you read the question, please?

A Yes. (The question was read)

A He did.

MR. PARKER: Q How do you know?

A I took him, early in April, to Madison Street, Hardings restaurant at Madison Street, and showed him this machine.

Q Can you give me the circumstances of your showing him the machine in a little greater detail?

A After the preliminary sketch of the machine we proposed to build, I thought it would be a good idea to have Mr. Squire

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see a machine in actual operation, as he had no idea of a machine of this type. His work had been as a tool maker and not as an electrical man.

THE COURT: Now let's get the question. Kindly read the question.

(The question was read)

THE COURT: You took him to Harding's and showed him the machine. You tell me what happened at Harding's.

A Mr. Squire operated the machine several times; that is all.

MR. PARKER: Q Can you state whether or not of your own personal knowledge there was any contact at that time or at your plant between Mr. Squire and Mr. Froelich, to your own knowledge?

A Yes.

MR. THREEEDY: I move that the answer be stricken and I object to the question, Your Honor. It is not relevant to the issues before the Court, not even on the question of conspiracy.

THE COURT: Froelich is charged as an alleged conspirator, is he not?

MR. THREEEDY: He is not a party to the suit.

MR. PARKER: Dismissed as to Froelich, your Honor, without prejudice. This is part of this chain of transactions, how-

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ever.

THE COURT: Overruled. He may answer.

MR. PARKER: Q Please state the circumstances, so far as you personally know them, of contacts or relationships, between Squire and Froelich.

A Mr. Froelich provided the people with the money that were to buy these machines, and was in daily contact with Mr. Squire in the building of the machine.

Q You have mentioned a certain sketch that you say you have. Can you produce any copy of it?

A Yes. This is a schematic sketch of the machine we built in 1934.

Q Do you know who made that sketch, the sketch of which that is a photostat?

A I made the sketch.

Q You personally recollect making that sketch?

A Yes.

Q Can you tell me about when you made it?

A April 1, 1935.

Q How do you establish that?

A Because I signed it as the inventor on that date, and Mr. Squire signed it as a witness.

Q Did Squire sign it in your presence?

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A Yes.

Q To your own knowledge, were those signatures applied as of the date shown?

A They were.

Q Please state what relationship the structure shown on the sketch has to the machine you actually manufactured, which you have already testified about.

A The electric principle is identical. There were a few slight changes mechanically.

Q Can you produce any pictures or photographs, or anything of that kind, of the machine you actually made?

A Yes.

Q Please produce them.

A These are photographs of the machine that we built in 1934.

MR. PARKER: Will you please read the witness' answer.

A I see not (The answer was read)

Q Is that date correct?

MR. PARKER: Read the answer again, please.

A I see not (The answer was reread)

A In 1935. I am wrong in my 1934 dates all the way through there.

Q Do you mean by that, you wish to correct any dates you

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A As 1934. It should be 1935.

Q Wherever you have given it?

A Yes.

MR. PARKER: These photographs are offered in evidence and the reporter is requested to mark them Plaintiffs' Exhibits 8 and 9, respectively. The photostat of the sketch is offered in evidence and the reporter is requested to mark it Plaintiffs' Exhibit 46, Carter Sketch.

MR. THREEEDY: We have not seen them, your Honor. I would like to see them.

THE COURT: Show them to your opponent.

THE COURT: You will have an opportunity to cross-examine.

MR. THREEEDY: All right.

(The exhibits were so marked)

MR. PARKER: Q Have you possession of the original of art sketch.

A I can get it.

Q How many of these machines did you say you manufactured?

A One.

Q You manufactured no more?

A None.

Q Please state why you limited your manufacture to one.

A Shortly after this first machine was made and sold, a

patent came out, issued to Mr. Griffith, covering machines of this type, and there were certain things in that patent that I didn't feel could be gotten around.

Q You have mentioned Mr. Griffith. Please state whether or not --

MR. THREEEDY: Just a minute. I would like to object to that question and answer, if the Court please.

THE COURT: A part of the answer is all right. I better strike out all the answer.

MR. PARKER: The answer shows acquiescence in the validity of the patent, which, after all, is part of this situation.

THE COURT: He is doing a good deal of reasoning. Read the question back.

(The second preceding question and answer read)

MR. PARKER: It simply indicates acquiescence on the part of a man who would otherwise have been an infringer.

MR. THREEEDY: I do not think it has a proper place in the record, if your Honor please.

THE COURT: I have stricken out the answer. He may answer the question again.

THE WITNESS: Read the question again.

(The question and answer were reread)

A Because of a patent that was issued.

MR. PARKER: Q What patent?

A On a similar machine.

Q Would you recognize the patent if you saw it?

A Yes.

Q I hand you plaintiffs' Exhibit 12, Griffith Patent No. 2,007,083, and ask you to state whether or not this is the patent to which you have alluded?

A It is.

MR. THREEEDY: We object to the answer and to any question propounded concerning why this witness discontinued making other machines because of the patent in suit, and move the Court that any action on the part of the witness is not binding on these defendants on the question of acquiescence in the validity of the patent.

THE COURT: What do you say?

MR. PARKER: The witness' acquiescence, such as it is, applies only to himself. There is no suggestion here that defendants are bound by his acquiescence.

THE COURT: Is he a party to the suit?

MR. PARKER: He is not a party to the suit.

THE COURT: What is the purpose then, what is the pertinency of it? I acquiescence in it too, for that matter.

MR. PARKER: Mr. Carter was a prospective infringer who had

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already made a machine very close to the machine made by the plaintiff and ceased when that patent came out.

THE COURT: Has that any relation to a man not a party to the suit?

MR. PARKER: It is my understanding that you can always show general acquiescence in the validity of a patent to reinforce the question of validity. There are many decisions where that has been done.

THE COURT: Let the answer stand, subject to further proof.

MR. PARKER: Q Please state whether or not you have ever met the patentee, Griffith, whom you have just mentioned.

A I have.

Q Please state under what circumstances.

A I had dinner with Mr. Froelich and Mr. Griffith.

Q Please state whether or not, to your personal knowledge, Mr. Squire and Mr. Griffith met.

A So far as I know, they never met.

MR. PARKER: That is all.

THE COURT: Cross-examine.

MR. THREEEDY: No cross-examination, if your Honor please.

THE COURT: Call your next witness.

Any objection to the offer of the exhibits?

MR. THREEEDY: On the grounds that they are irrelevant and

No. 15-014 / Case

Plaintiff brief - 3 weeks.

Defendant " 3 weeks
thereafter

Plaintiff reply - 2 weeks thereafter. ed. (Referring
on page 184)

After briefs are in then to be
set for oral argument in
October.

Phoebus Corporation and
Royalite Rifle Range

Ford Amusement Devices
etc.

Q What is under advisement?

A No. 1 Asbury Avenue, Winnetka.

Q What is your present occupation?

A I am vice-president and secretary of the Phoebus Corporation.

Q Phoebus Corporation, the plaintiff herein? You mean the
Phoebus Corporation which is a plaintiff.

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immaterial to the issues before the Court.

THE COURT: Overruled. Let them be admitted. (Referring to Plaintiffs' Exhibits 8, 9 and 46, offered on page 184)

K E N N E T H B. C L A R K,
called as a witness on behalf of the plaintiffs, having been first duly sworn, testified as follows:

DIRECT-EXAMINATION
By Mr. Norman Parker:

Q Please state your full name.

A Kenneth B. Clark.

Q Please state your age.

A Forty-one, I believe.

Q Your address?

A Residence?

Q Yes.

A No. 1225 Asbury Avenue, Winnetka.

Q What is your present occupation?

A I am vice-president and secretary of the Phoebus Corporation.

Q Phoebus Corporation, the plaintiff herein? You mean the Phoebus Corporation which is a plaintiff herein?

A Yes.

Q Please state how long you have been connected with them.

A Since its inception.

Q Are you familiar with the electric target range which is the subject matter of the present suit?

A I am.

Q Can you tell me whether or not the plaintiff corporation, either plaintiff corporation, is operating such machines?

A They are.

Q Will you please state how many of these machines they now have in operation?

A Something over fifty.

Q State how long it is since the first of these machines was put in operation.

A Fourteen months.

Q State how long the oldest of your individual machines now in operation has been in operation.

A Somewhat over fourteen months; since the first of March, 1935.

Q Do you mean that some of the machines which were put in operation the first of March, 1935, are still in use?

A Yes.

MR. THREEEDY: I object to that question as leading the wit-

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ness, if the Court please.

THE COURT: Overruled.

MR. PARKER: Q Who is now making machines for plaintiffs?

A J. P. Seeburg Corporation.

Q State how long it is since the J. P. Seeburg Corporation began to build machines.

A Six weeks.

Q State how many machines they have built in that period.

MR. THREEDY: I object to the question.

THE COURT: The question, please.

(The question was read)

MR. THREEDY: "They," if the Court please, refers to a party not a party to this suit. It is calling for a conclusion on the part of the witness, if anything.

MR. PARKER: This line of questions is to indicate that plaintiff is working actively under this patent; that the patent is not a paper patent, but one that is being actively exploited.

THE COURT: It is asking what somebody else did.

MR. THREEDY: That is right.

MR. PARKER: Simply asking how many machines have been delivered to these plaintiffs who are installing and operating them.

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THE COURT: You may answer.

MR. THREEDY: I don't believe that is a question, strictly; I may have misunderstood.

MR. PARKER: I will repeat the question as I just repeated it to the witness, and ask the witness to answer the question in that very form.

THE COURT: What was the preceding question?

Q Please (The record was read as follows: "Q State how long it is since the J. P. Seeburg

A I do Corporation began to build machines.

Q Please A Six weeks. Q State how many machines they have built in that period.")

THE COURT: I will sustain the objection to that question.

MR. PARKER: Q Please state at what rate Phoebus Corporation is now putting new machines into operation.

A We are receiving two machines a day from the J. P. Seeburg Corporation.

Q Please state whether or not this is a rate you expect to keep up for the future.

MR. THREEDY: I object to that.

THE COURT: Sustained.

MR. PARKER: Q Can you produce any general information concerning the income received by you from the machines you

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now have installed? In other words, the average daily income per machine.

A The original machines are currently earning \$3.50 a day, on the average. The new machines are currently earning \$6.00 to \$7.00, on the average, a day.

Q Six to seven?

A Between \$6.00 and \$7.00 a day on the average.

Q Please state whether or not you have any licensees under the patent in suit.

A I do not understand the question.

Q Please state whether or not any party is manufacturing devices under the patent in suit under license for sale or other use.

A J. P. Seeburg Corporation.

Q Please state, if you know, how many machines they have manufactured under this license.

THE COURT: Is there an objection?

MR. THREEEDY: I did not say anything, if your Honor please.

THE COURT: Did you get the question?

THE WITNESS: Yes. Is it all right to answer? It is the same question.

MR. PARKER: Answer the question.

A The last machine we received was No. 66 of their produc-

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tion line. They have since made at least ten additional machines.

Q State when this licensee first began to manufacture under this license.

A We gave them a license contract last November. They have been in manufacture ever since.

Q State when the first machines were sold under license by the licensee.

A April 20th.

Q April 20th of what year?

A This year.

Q Please state whether or not you had any personal part in handling or placing the original machines put out by Rayolite?

A Yes, I did.

Q State whether or not you had any assistants in this connection.

A Yes.

Q State whether or not you are personally acquainted with a certain Morris Froelich.

A Very well.

Q State the circumstances of your acquaintance with him.

A Morris Froelich operated a theatre that my mother owned

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on South State Street here in Chicago. He leased that from Mother. That ran over a period of at least ten years.

Q State what connection, if any, you have had with Mr. Froelich since that time.

A The estate of Jonathan Clark, of which I am a beneficiary, maintained offices in the Straus Building, where I also made my office during the year 1935. Morris Froelich used that as a stopping-off place and visited the office almost daily. He was a close friend of the agent of the estate, namely, Fred Tapsfield. Mr. Froelich knew of the early development of the Rayolite machine and of the early stages of the Phoebus Corporation. I consulted Mr. Froelich because I valued his experience in business and considered him much more experienced in this field than was I. Mr. Froelich offered me many suggestions and was critical, both constructively and otherwise, of our early efforts. He always felt if our company was well managed that we had a very successful career ahead of us, but that under our management it could not succeed.

Q Please state whether or not Mr. Froelich had any connection in any capacity with Phoebus Corporation or Rayolite, the plaintiffs herein.

A Mr. Froelich was very anxious to make a connection with our firm and did many small tasks for us voluntarily. There

Clark-direct

were certain of our officers who objected to his employment, but I always thought that they were not giving him full appreciation. Hence, when an opportunity presented itself to put him to work, I gave him such an opportunity and he was in charge of the two guns that we had at the Harding restaurant at 68 West Madison during the Coin Show, the winter of 1935.

Q Please state whether or not Mr. Froelich had personal custody of any other Rayolite machines.

A After the Coin Show I set Mr. Froelich up in business on Wabash, near Jackson, to the extent that I personally paid for the decoration of his store, the rent to be paid for on a percentage of the take of the machines. I also loaned Mr. Froelich furniture.

MR. TREEDY: If the Court please, I would like to have the Court request the witness to confine the answers to the questions. The witness seems to go quite far afield from the subject matter sought to be elicited by the interrogation.

THE COURT: As I understand it, Froelich is out of this case.

MR. TREEDY: That is correct, your Honor.

THE COURT: I have been waiting for some connection with this case.

MR. PARKER: I want to corroborate the statement of Mr. Carter that he was in charge of the machine at Harding's, which

the witness has done, and I will excuse him from further direct-examination.

MR. THREEEDY: No cross-examination, your Honor.

THE COURT: Call your next witness.

MR. PARKER: That is all, your Honor. No more witnesses.

THE COURT: Does the plaintiff rest?

MR. PARKER: Plaintiff rests.

PLAINTIFFS REST

THE COURT: Have you a witness you can use for fifteen minutes?

MR. THREEEDY: I have some models to set up that might take five of the fifteen minutes. I am willing to go ahead, however. I have a witness here, answering your Honor's question.

THE COURT: I do not know what to do.

(A colloquy was held between Court and
counsel in chambers; out of the hearing
of the reporter)

THE COURT: The further hearing of this case will be adjourned until June 29th, at 2:00 p. m.

WHEREUPON an adjournment was taken until
Monday, June 29, 1936, at 2:00 o'clock p.m.

to Plaintiffs' Exhibits 8, 9 and 46, ordered on page

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Plaintiffs brief - 3 weeks.

Defendants " 3 weeks
thereafter

Plaintiffs reply - 2 weeks thereafter.

After briefs are in then to be
set for oral argument in
October.

Phoebus Corporation and
Royalite Rifle Range

Ford American Division
etc.

Not under advisement.